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Department of
Agriculture

Forest
Service

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U.S. Department of Transportation (DOT) Dockets
Docket No. FAA-99-5483-24
400 Seventh Street SW.
Room Plaza 401
Washington, DC 20590

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Subject: Comments on Notice of Proposed Rulemaking (NPRM)

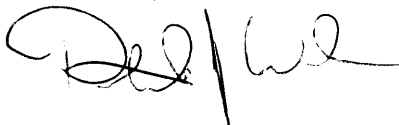
To whom it may concern:

This letter is to comment and provide input on the Notice of Proposed Rulemaking, Docket Number FAA-1999-5483, concerning Parachute Operations. In addition, this letter serves as a request to petition for an additional change to 14 CFR, Part 105. For your information, I am currently employed by the U.S. Forest Service as their National Smokejumper Technical Specialist. In addition I am a Certificated Master Parachute Rigger and Designated Parachute Rigger Examiner, both with Back, Chest, and Seat Type Ratings.

As written, **all** proposed rulemaking changes presented in the NPRM docket are valid and pertinent relating to parachuting operations. I support all changes proposed in this docket.

After a telephone conversation with between Randy Montgomery of the F.A.A., and myself, Pat Wilson of the U.S. Forest Service, an additional change to 14 CFR Part 105 is proposed. Specifically Part 105.43 identifies "Approved Parachutes" as those that are manufactured under a type certificate or a Technical Standard order (C-23 Series); or a military parachute identified by an NAF, AAF or AN drawing number, or any other military designation or specification number. I would like to propose wording that would add Forest Service parachutes to this classification of "approved" parachutes. The enclosed attachment gives the specific proposed language changes, as well as reasons behind the request, a description of Forest Service quality assurance programs; problems applying the TSO system to the Forest Service; and anticipated impacts of the proposed change if adopted. This request is similar to one also being submitted through formal channels by the Forest Service.

Sincerely,



Patrick J. Wilson

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Request for Additional Rulemaking Changes.

The Forest Service would like to petition the FAA to change the wording in **10543(d)(2)** to read: “A personnel-carrying military or Forest Service parachute (other than a high altitude, high-speed, or ejection kind) identified by an NAF, AAF, AN, or an MTDC drawing number, an AAF order **number**, or any other military or U.S. Forest Service designation, specification number or drawing.”

The current language reads: 105.43(d)(2) A personnel-carrying military parachute (other than a high altitude, high speed or ejection kind) identified by an NAF, AAF, or AN drawing number, an AAF order number, or any other military designation or specification number.

Reasoning Behind This Request.

The Forest Service as a civilian government agency conducts Smokejumping operations that involve parachute delivery of **wildland** fire fighters to remote forest fires using parachutes as a primary delivery means. Although these missions are flown in a Public Aircraft environment, the Forest Service chooses to conduct its parachuting operations in accordance with 14 CFR Parts 65 and 105. The Bureau of Land Management conducts similar operations within their agency, and there is an approved operating plan to allow joint operations between the two agencies.

The Forest Service maintains a Technology and Development (T&D) organization, the Missoula Technology and Development Center (MTDC). MTDC is **staffed** with a full time parachute technical specialist, engineers, draftspersons, specification writers, technical photographers and other skills needed by a T&D organization. MTDC also maintains active working relationships with Army, Navy, and Air Force personnel who design and procure military parachutes. MTDC also maintains active working relationships with the best technical experts in the commercial parachuting industry and quality assurance laboratories to stay abreast of current parachute technology.

Within the Forest Service, MTDC is delegated responsibility to design parachute equipment that meets Forest Service needs, and to conduct airworthiness testing using appropriate standards. MTDC controls the design of Forest Service parachute equipment with technical drawings. During the contract procurement of parachutes, MTDC provides the technical oversight needed to insure quality during manufacture. When Forest Service equipment is manufactured at Forest Service parachute lofts, MTDC provides the quality control standards this equipment must meet.

Quality Control Procedures / Forest Service Parachute Equipment

Forest Service parachute manufacturing contracts are awarded by competitive bid. MTDC requires the successful bidder to maintain a quality system that conforms to **MIL-Q-9858A**, Quality Program Requirements. MTDC representatives inspect and verify this quality program at the contractor's facilities for each contract. Forest Service parachute procurement contracts apply MIL-P-6645, a specification which defines military standards for the manufacture of parachute equipment. All critical component materials included in Forest Service parachute designs are controlled by military specifications, or by formal specifications prepared by the Forest Service.

The Forest Service reviews actual test data submitted with Certificates of Compliance for each component material procured by our contractors for use in fabrication of Forest Service parachutes. In addition, Forest Service parachute contracts require verification testing of critical materials at an approved textile laboratory. The Forest Service requires contractors to produce one or more First Article parachutes, which are inspected at the contractor's facilities. The Forest Service employs Defense Contract Administration (DCAS) inspectors to perform in-process inspections at the contractor's production facilities when a Forest

Service representative cannot be present. Finally, the Forest Service inspects each end-item parachute before it is accepted from the contractor.

The quality procedures the Forest Service applies to its competitive parachute contracts are more rigorous than those the Army or Navy applies, and are very similar to Air Force standards, which are the most rigorous of the military services. As such, the quality assurance procedures the Forest Service applies to its parachute procurement contracts are as if not more rigorous and effective, as current FAA TSO system requirements.

At Forest Service parachute lofts, MTDC provides appropriate quality controls for manufacturing parachute equipment. Technical drawings for a Forest Service “approved” design are provided. For each production lot, lofts prepare a First Article and submit it for inspection by MTDC personnel. Each loft applies procedures to insure that correct materials are used for fabrication and each loft applies a system of in-process inspections to insure that construction and dimensions correspond to the MTDC drawings.

Military versus Forest Service Parachute Equipment

Within the TSO system, the FAA accepts military parachute equipment as “approved”. The military has the technical capability to design and test equipment, then produce drawings of this equipment for manufacture. The military uses a system of military specifications, standards, and inspections to control the quality of parachute equipment fabricated by a variety of manufacturers selected by competitive bid. The military system for testing and procuring parachutes serves the same function as the FAA TSO system.

Like the military, the Forest Service maintains the technical capability to design and test parachute equipment then produce drawings that control its designs. Forest Service requirements for airworthiness meet or exceed TSO requirements. Like the military, the Forest Service applies military specifications, standards, and contract requirements to control the quality of the parachute equipment manufactured by contractors or by Forest Service parachute lofts. In effect, the Forest Service maintains an identical process used by the military, which is recognized by the FAA as a means of producing “approved” parachutes. The only difference is that the FAA does not recognize Forest Service parachutes or equipment as “approved”.

Problems of Applying the FAA TSO System to Forest Service Parachute Equipment

Commercial parachutes are designed and manufactured by private industry for sale to general aviation pilots or to sport parachutists. Manufacturers of commercial parachutes face competitive pressures. Without FAA standards to insure a minimum level of airworthiness and quality, some commercial manufacturers could short cut parachute design standards or quality control procedures during manufacturing. The TSO system works to insure that commercial parachute designs meet a reasonable standard for airworthiness, and that a FAA approved quality control system is in place to maintain that airworthiness standard during manufacture. As a way of regulating the commercial parachute industry, the FAA TSO system works.

Neither the Forest Service nor the military face competitive pressures that work against applying the highest standards to the airworthiness of parachute equipment design or quality control during manufacturing. During procurement of parachute equipment using competitive contracts, both the military and the Forest Service must assume that the motivation for the contractor to make a profit could result in manufacturing short cuts that may adversely affect quality. Thus, requiring “the manufacturer” to maintain a quality control system is not adequate to insure that sub standard products will not be delivered. Both the Forest Service and military apply a strict system of quality requirements and inspections to insure quality during manufacture. Forest Service personnel are actively involved in applying these procedures during the course of a parachute procurement contract.

Some Forest Service parachute equipment is fabricated at Forest Service smokejumper lofts rather than by contractors. When parachute equipment is manufactured in house, smokejumpers have the highest level of self-interest in producing quality equipment for their own use. At a smokejumper loft, there is no motivation to cut costs with substandard materials or to apply expedient manufacturing procedures. The Forest Service prescribes quality control procedures for in house manufacturing that is similar to the quality control procedures described above used when contractors manufacture smokejumper equipment. The only

real difference is that DCAS employees are not used for in process manufacturing. MTDC is responsible for quality assurance and first article inspections during manufacture or parachuting equipment in Forest Service lofts. Also, because the people who manufacture this equipment are also the end users of the products, quality control standards are inherently high.

TSO Problem for the Forest Service: Unnecessary Additional Costs.

In some cases, a requirement for the Forest Service to obtain TSO authorizations could produce significant extra costs that are not necessary to insure the airworthiness of a design. For example, some Forest Service equipment is identical in configuration to commercial designs manufactured under a TSO authorization, except stronger materials are used. In this case, the airworthiness of the basic design is not a question. MTDC would accomplish testing necessary to insure that the stronger materials did produce the strength required to meet Forest Service needs. But MTDC would not accomplish the full range of tests required by the TSO because other airworthiness characteristics are known. However to submit a complete package of technical data to the FAA, the Forest Service would be obligated to accomplish the full range of test data required by the TSO even if these tests had no technical value in validating the airworthiness of a design.

Impacts of the Proposed Change.

The Forest Service does not anticipate that the proposed regulation change would have any impact on any other commercial or military design or manufacture or parachute equipment. Due to the specialized nature of smokejumping, parachutes and equipment manufactured for this purpose would have no application in commercial or sport parachuting operations. Even if they were for some reasons used in these environments, the quality controls in place during manufacturing would ensure that this equipment was as safe and airworthy, if not more so, equipment manufactured for sport or commercial parachuting.

Conversations between MTDC and private parachute manufacturers who are also members of the Parachute Industry Association on this subject have not surfaced any concerns from the private sector concerning this proposal. Their feeling is that this proposed change would have virtually no effect on their work, equipment, or operations, and they had no objection to the Forest Service's request for this wording change to 14 CFR 105.43.